

1 I CLAIM:

2 1. A navigation system comprising:

3 end user electronic devices;

4 a customer-interface server; and

5 a navigation-services server,

6 wherein said end user electronic devices send requests for navigation services to  
7 said customer-interface server and receive responses to said requests from said customer-  
8 interface server;

9 wherein said customer-interface server includes programming that, upon  
10 receiving said requests from said end user electronic devices, transmits query messages  
11 over the Internet to said navigation-services server, wherein said query messages request  
12 navigation information for responding to said requests;

13 wherein said navigation-services server receives said query messages from said  
14 customer-interface server, and using navigation applications installed on said navigation-  
15 services server and a geographic database associated therewith, formulates language-  
16 independent reply messages to said query messages, and sends said language-  
17 independent reply messages to said customer-interface server; and

18 wherein said customer-interface server further includes programming that, upon  
19 receiving said language-independent reply messages from said navigation-services  
20 server, formulates said responses and sends said responses to said end user electronic  
21 devices.

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23 2. The navigation system of Claim 1 wherein said requests for navigation  
24 services from said end user electronic devices are sent to said customer-interface server  
25 over the Internet.

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27 3. The navigation system of Claim 1 wherein said language-independent  
28 replay messages are in XML format.

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1           4.     The navigation system of Claim 1 wherein said customer-interface server  
2     uses XML stylesheets to formulate the responses that are sent to said end user electronic  
3     devices.

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5           5.     The navigation system of Claim 1 wherein the responses that are sent to  
6     said end user electronic devices are in HTML format.

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8           6.     The navigation system of Claim 5 wherein said customer-interface server  
9     uses an XML stylesheet to formulate the responses that are sent to said end user  
10    electronic devices into HTML format.

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12          7.     A method for providing routing information using a navigation system, the  
13    method comprising:

14               on a customer-interface server, receiving a request over a data network from an  
15    end user for route guidance to a destination;

16               from the customer-interface server, sending a message over the data network to a  
17    navigation-related information server for maneuvering instructions;

18               on the navigation-related information server, after receiving the message from the  
19    customer-interface server, calculating a route to the destination and determining a series  
20    of maneuvers for traveling along a route to the destination;

21               on the navigation-related information server, forming a language- and format-  
22    independent data structure that represents the series of maneuvers;

23               from the navigation-related information server, sending the language- and format-  
24    independent data structure over the data network to the customer-interface server;

25               on the customer-interface server, using the language- and format-independent data  
26    structure received from the navigation-related information server to form language- and  
27    format-specific maneuvering instructions; and

28               from the customer-interface server, providing the form language- and format-  
29    specific maneuvering instructions to the end user over the data network.

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1           8.       The method of Claim 7 wherein the language- and format-specific  
2 maneuvering instructions are in HTML format.

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4           9.       The method of Claim 7 wherein the language- and format-independent  
5 data structure is in XML format.

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7           10.      The method of Claim 7 wherein the data network comprises the Internet.

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9           11.      The method of Claim 7 wherein said customer-interface server uses an  
10 XML stylesheet to form the language- and format-specific maneuvering instructions.

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